REMARKS

I. Introduction

In response to the Office Action dated July 20, 2009, no claims have been cancelled, amended or added. Claims 1-4, 8, 11, 13-19, 23, 26, 28-34, 38, 41 and 43-45 remain in the application. Re-examination and re-consideration of the application is requested.

II. Prior Art Rejections

In paragraph (6) of the Office Action, claims 1-4, 8, 16-19, 23, 27, 31-34, and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson et al., U.S. Patent No. 7,082,411 (Johnson) in view of Atkins, U.S. Patent No. 5,852,811 (Atkins) in view of Sulkowski et al., U.S. Publication No. 2004/0039688 (Sulkowski) and further in view McCann, U.S. Patent No. 5,963,939 (McCann). In paragraph (7) of the Office Action, claims 13, 28, and 43 were rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson in view of Atkins in view of Sulkowski and further in view of McCann and further in view of Gillis, U.S. Patent No. 6,405,189 (Gillis). In paragraph (8) of the Office Action, claims 15, 30, and 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson in view of Atkins, in view of Sulkowski, in further view of McCann, in view of Gillis, and further in view of Chen et al., U.S. Patent No. 6,625,624 (Chen). In paragraph (9) of the Office Action, claims 11, 14, 26, 29, 41, and 44 were rejected under 35 U.S.C. §103(a) as being unpatentable over Atkins in view of Sulkowski, in further view of McCann and Choy, U.S. Patent No. 5,551,027 (Choy).

Applicants' attorney respectfully traverses these rejections, and submits that the combination of references does not teach or suggest the combination of elements recited in Applicant's independent claims.

Independent claims 1, 16 and 31 are generally directed to performing financial processing in a computer. Claim 1 is representative and is directed to a method of performing financial processing in one or more computers, comprising: (a) selecting accounts, forecast amounts, and attrition and propensity rates from a database through parallel processing of a selector function, wherein the selector function uses selection criteria specified by rules to select the accounts, forecast amounts, and attrition and propensity rates from the database, the selector function dynamically generates Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL

statements, and the grouped selection criteria are processed independently and in parallel to yield output tables comprising the accounts, forecast amounts, and attrition and propensity rates selected from the database; and (b) performing one or more Net Present Value (NPV) and Future Value (FV) calculations on the selected accounts using the selected forecast amounts and attrition and propensity rates, wherein results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers.

The combination of Johnson, Atkins, Sulkowski and McCann does not teach or suggest all of these elements of Applicants' independent claims.

Nonetheless, the Office Action asserts the following:

> 6. Claims 1-4, 8, 16-19, 23, 27, 31 -34, and 38 are rejected under 35 U.S. C. 103(a) as being unpatentable over US Patent Number 7,082,411 to Johnson et al (hereinafter Johnson) in view of US Patent Number 5,852,811 to Atkins (hereinafter Atkins) in view of US Patent Application Number US2004/0039688 to Sulkowski et al (hereinafter Sulkowski) further in view of US Patent Number 5,963,939 to McCann et al. (hereinafter McCann).
>
> As per claims 1, 16 and 31
>
> Johnson discloses selecting accounts, amounts and attrition (discount factor) (column 9, lines 3-11) and propensity (risk) (column 9, lines 20-22 & column 16, lines 49-51) rates (asset data) from a database through a selector function, wherein the selector function uses selection criteria specified by rules to select the accounts, amounts and, and attrition and propensity rates from the database (column 4, lines 10-19) and performing one or more Net Present Value (NPV) (column 9, lines 3-26) and Future Value (FV) (C_n, expected payoff) calculations on the selected accounts using the selected amounts and rates (column 9, lines 3-26 & 58-60). Examiner notes that applicant's specification conceptually defines attrition rates as "the rate at which a cash flow will be decreased" (page 8, lines 25-26). Johnson teaches a discount factor. One skilled in the art at the time the invention was made would understand that a discount factor is a rate used to discount or decrease future cash flow.
>
> Johnson does not specifically teach the amounts comprise forecast amounts.
>
> Atkins discloses the amounts comprise forecast amounts.
>
> Therefore it would have been obvious to one skilled in the art at the time the invention was made that the amounts comprise forecast amounts as taught by Atkins as a type of selected amount found in a database to select in order to determine values and rates regarding the asset utilizing the time value money equations.
>
> Johnson does not specifically teach results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers.

Sulkowski teaches results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers (paragraphs [0009-0010, 0027, 0066-0077 and 0104-0112).

Therefore it would have been obvious to one skilled in the art at the time the invention was made that results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers as taught by Sulkowski to accurately evaluate future profitability of assets by taking into account present and future values.

Johnson discloses the selector function generates statements (criteria ... for use in valuating other asset data) that are executed by a database management system to perform the selection of the accounts, amounts and attrition and propensity rates selected from the database (column 4, lines 10-19). Johnson does not specifically teach dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables.

McCann teaches dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables (column 69, lines 15-41).

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the financial processing system of Johnson, Atkins and Sulkowski to include dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables as taught by McCann to allow a user to fully utilize the output to determine relationships between information as well as process similar selections together concurrently so that fewer passes need to be made through the tables in the relational database.

In addition, the Office Action asserts the following:

For sake of compact prosecution, Examiner will again address applicant's arguments/remarks from October 10th, 2008:

a. Applicant argues that Johnson does not specifically teach "a selector function that uses selection criteria specified by rules to select accounts, forecast amounts, and attrition and propensity rates from a database," "rules used by a selector function for accessing a database," "selection of attrition rates or propensity rates from a database," or "calculation of FV or the subsequent calculation of LTV." Examiner would first like to point out that Johnson was not relied upon for the calculation of LTV. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of

references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Examiner notes that as Applicant has stated Johnson "describe[s] retrieving individual asset data from a database based on a given criteria, performing an NPV calculation." The act of "retrieving data" based on "given criteria" is in it of itself selection criteria. The rules by which this data is retrieved can be anything such as a rule to only access the required information instead of always retrieving everything and anything possible in the database. Examiner asserts that there must be some set of rules/guidelines to select information, otherwise the correct/required information wouldn't be accessed. Examiner further asserts that Johnson does teach retrieving rates (attrition rates etc). Applicant's specification conceptually defines attrition rates as "the rate at which a cash flow will be decreased" (page 8, lines 25-26). Johnson teaches a discount factor (column 9, lines 3-26), which would have inherently needed to be accessed from a database to use in the determination of NPV. One skilled in the art at the time of the invention was made would understand that a discount factor is a rate used to discount or decrease future cash flows to obtain a net present value. Therefore it would have been obvious to one skilled in the art at the time of invention that Johnson does disclose "a selector function that uses selection criteria specified by rules to select accounts, amounts and attrition and propensity rates from a database."

Applicant states that the prior art "do[es] not refer to the calculation of FV." Examiner notes that the equation in the Johnson reference is a Future Value (C1) equation solving for Net Present Value (NPV). It would have been obvious to one skilled in the art at the time the invention was made that this equation could easily be manipulated to solve for Future Value or any of the other variables in the equation. Therefore it would have been obvious to one skilled in the art at the time of invention that Johnson does disclose "the calculation of FV."

b. Applicant argues that Sulkowski does not specifically teach "a selector function that uses selection criteria specified by rules to select the accounts, forecast amounts, and attrition and propensity rates from the database," or "performing NPV and FV calculations on selected accounts using selected forecast amounts, and attrition and propensity rates, wherein results from the NPV and FV calculations are integrated to proved an LTV." Examiner would first like to point out that Sulkowski was not relied upon for a selector function that uses selection criteria specified by rules to select the accounts, forecast amounts, and attrition and propensity rates from the database, or performing NPV and FV calculations on selected accounts using selected forecast amounts, and attrition and propensity rates". In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant admits that Sulkowski teaches the calculation of a NPV for each account. As was explained above, NPV is determined by using FV and vice versa. Sulkowski further states that "the lifetime-value is thus risk-base, in that it takes

the past, current and future charge-off risk of an account into consideration." The reference goes on to clarify that it "generates a net present value for each account in one or more future periods ... [utilizing] an adjusted cash flow discount rate, and the number of periods into the future for which to calculate forecasted Lifetime-value" (paragraphs [0066-0067]). Examiner notes that a net present value in multiple future periods utilizing discount rates would be a future value (FV). Sulkowski further states that "the lifetime-value (LTV) is then the sum of discounted cash flows for each account" (paragraph [0069 and 0077]). Therefore it would have been obvious to one skilled in the art at the time of invention that Johnson does disclose results from the NPV and FV calculations being integrated to provide an LTV.

c. Applicant argues that Atkins "forecast amounts" are not used in the same context of Applicant's claims "namely the calculation of Net Present Value (NPV) and Future Value (FV) where the results of those calculations are integrated to provide a Life-Time Value (LTV). Applicant admits that Atkins describes a financial program utilizing the analysis and reporting of investments that takes into account forecast amounts. Atkins was relied up on to teach that forecast amounts are used as a type of selected amount found in a database to select in order to determine values and rates regarding the asset utilizing the time value money equations. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

d. Applicant states that Choy "says nothing about selection criteria being grouped in order to combine them in dynamically generated SQL statements, or that such grouped selection criteria are processed independently and in parallel to yield output tables comprising accounts, forecast amounts, and attrition and propensity rates selected from the database for use in both Net Present Value (NPV) and Future Value (FV) calculations that are integrated to provide a Life-Time Value (LTV)." Examiner notes that these arguments are made with respect to the amended claim language. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

e. Applicant states that Foran "says nothing about processing selection criteria independently and in parallel and processing of queries or SL statements having selection criteria." Examiner notes that these arguments are made with respect to the amended claim language. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicants' attorney respectfully disagrees with this analysis.

Consider, for example, the portions of the Johnson, Atkins, Sulkowski and McCann references cited by the Office Action, which are set forth below:

Johnson: column 4, lines 10-19

Individual asset data (not shown) for each asset in portfolio 12 is entered into a database 76 from which selected data 78 is retrieved based on a given criteria 80 for the iterative and adaptive process 32. When criteria 80 is established for valuation of any asset, that established criteria 80 is stored in database 76 for use in valuating other asset data in database 76 which shares such an established criteria. Iterative and adaptive valuation process 32 thus develops 82 valuations (described below) and groups 84 them for use in bidding.

Johnson: column 9, lines 3-26

In general, NPV is defined as:

$$NPV = c_0 + \frac{c_1}{1+r}$$

where C.sub.0 is the investment at time 0, C.sub.1 is the expected payoff at time 1, and r is the discount factor. The basic idea is that a dollar today is worth more than a dollar tomorrow.

In the case of insurance policies, NPV is defined as:

$$NPV = \sum P - \sum E - (\sum C) \times \frac{A}{E_W}$$

where P is the premium, E is the expected nominal cost, and C is the claim cost. In essence, Equation B is how net income as the difference of profit and weighted expected risk is generated. Note that the summation is summing across all the policies in a specific segment. Also note that all the premium, nominal cost, and claim cost have been discounted before entering the equation. As a result, a profitability score is generated.

Johnson: column 9, lines 58-60

Each potential bidder has a range of possible bids that might be submitted to a sealed bid auction. The range of bids can be expressed as a statistical distribution. By stochastically sampling from a distribution of bid values, one possible auction scenario may be simulated. Further by using an iterative sampling technique, for example a Monte Carlo analysis, many scenarios are simulated to produce a distribution of outcomes. The distribution of outcomes include a probability of winning the auction item(s) and the value gain. By varying the value of ones own bid, a probability of winning the auction against ones own bid price can be determined.

Johnson: column 16, lines 49-51

The appropriate variance adjusted forecast is made for each asset and the valuation tables are constructed to include every asset in the portfolio. The recovery is valued with continuous probabilities at the unit of sale, which in one embodiment is a tranche. In the use of system 28, internal rate of return ("IRR") and variance would then be assessed. Preferred tranches have lower variances for a given IRR. The probability of each tranche's net present value ("NPV") to be above 0 is assessed using the project's discount rate. A discount rate is determined from the opportunity cost of capital, plus FX swap cost, plus risks in general

uncertainties inherent in the variances of forecasted cash flow recovery. If it appears that there is more than a five-percent certainty that the project will have a negative NPV, no bid is made. Deal evaluation is by tranche with decision criteria being IRR, risk variance of the IRR in a tranche, estimated willingness and ability of the tranche to pay, time to profit ("TPP") and the risk variance in the payback by tranche, and NPV of the expected cash flow by tranche discounted to risk free rate.

Atkins: Abstract

A personal financial program is disclosed incorporating means of implementing, coordinating, supervising, planning, analyzing and reporting upon investments in an array of asset accounts and liability accounts within a client account. Through a prioritization function, the client specifies his financial objectives, his risk preference, a forecast of economic and financial variables, and budgetary constraints. The prioritization function suggests to the client a portfolio of asset and liability accounts that may be credited and debited to form investments and borrowings to best realize his financial objectives over a defined time horizon. In the preferred embodiment a central structural element of the financial account is a liability account secured by the client's home and one or more asset accounts. Client funds that would normally be used to amortize the mortgage may be alternatively used according to a prioritized allocation of funds to asset accounts and liability accounts. The client account is imbalanced if the client's borrowing power is less than the minimum borrowing power specified by the financial institution. If the account is imbalanced, the client may reallocate the assets and liabilities within the client account and/or modify a set of constraints on the client account. If the client account is still not balanced after modification of the account, the system initiates a liquidation procedure.

Sulkowski: paragraphs [0009-0010]

[0009] The present invention, referred to as the Lifetime-value (LTV) framework, is directed to a system and method that permits accurate forecasting of the future value of credit accounts. The LTV framework estimates the Lifetime-value of each credit account. An account is characterized by its cash flows, product attributes, and degree of belongingness to customer behavior segments based on common patterns such as revolving and transacting. By examining how accounts migrate between behavior segments over multiple quarters and analyzing the discounted cash flows associated with these migration patterns, a net present value is calculated for each account.

[0010] The Lifetime-value is thus risk-based, in that it takes the past, current and future charge-off risk of an account into consideration, and includes a capital charge, i.e. the cost associated with capital employed by a financial institution, for example, to provision for unanticipated risk.

Sulkowski: paragraph [0027]

[0027] The present invention is directed to a system and method that permits accurate forecasting of the future value of credit accounts. In one

embodiment of the invention the system is referred to as the Lifetime-value (LTV) framework.

Sulkowski: paragraphs [0066-0077]

[0066] Turning again to FIG. 1, the Net Present Value Module 140 is operatively connected to the initial membership vectors stored in IMV Table 115 and Super Table 120; and the transition matrices 135. NPV Module 140 examines a credit account's initial membership vectors and the probabilities of that particular credit account exhibiting particular behavior patterns in subsequent periods (transition matrices 135) and generates a net present value for each account in one or more future periods.

[0067] The NPV Module 140 may also receive other select inputs 145 from a user when generating the net present value of an account. Other select inputs 140 may include, for example, an adjusted cash flow discount rate, and the number of periods into the future for which to calculate forecasted Lifetime-value.

[0068] A new membership vector (NMV) characterizes each account's degree of belonging to the profit driver segments in a future period. This calculation may be iterated for as many periods as one desires to project. It should be noted; however, that the number of iterations is finite (is a finite value) as all credit accounts eventually close. Credit accounts may be closed, for example, through attrition--as by affirmative action of the credit account owner, by death of the credit account owner, or by action of credit account management.

[0069] The new membership vector (NMV) is multiplied by a Cash Flow Vector to obtain the Next Period Discounted Cash Flow. The Lifetime-value (LTV) is then the sum of Discounted Cash Flows for each account.

[0070] The baseline LTV thus represents an account's value to the financial institution's future profit potential, assuming that the account maintains the same account attributes over the time period being evaluated. The baseline Lifetime-value evaluates the future profitability of each account based on its current attributes and not on its potential given that the attributes are altered via account management.

[0071] A diagrammatic representation showing the vector/matrix multiplication to obtain the new membership vector (NMV) 400 according to one embodiment of the present invention is shown in FIG. 4.

[0072] In the embodiment of the invention as shown, initial membership vector 200 is multiplied by transition matrix 300 to obtain new membership vector 400. Standard mathematical principles are used to complete this operation as are well known in the art. By way of example, each profit driver segment term in the row of the initial membership vector 200 is multiplied by the corresponding profit driver segment term in the column of the transition matrix 300. The products of these multiplications are then summed along the column for a particular profit driver segment to arrive at the corresponding profit driver term in the new membership vector. Using the illustrated embodiment as an example we have the following vector multiplication to obtain the VHR term in the new membership vector: 1 (.65) (.60) + (.11) (.07) + (.04) (.02) + (.02) (0) +

(.01) (.04) + (.02) (0) + (.01) (.01) + (.04) (.04) + (.1) (.15) + (0) (0) = .4156 or 41.56 % (42 %)

[0073] Similar operations would be completed for all columns in the transition matrix 300 until the new membership matrix 400 is complete. In the examples, the percentages are rounded to the nearest percent, for simplicity. Preferably at least two decimal points of precision are used.

[0074] As described earlier, the new membership vector 400 is multiplied across the average cash flow for every profit driver segment to obtain a future period cash flow. This cash flow is then discounted to derive a net present value figure.

[0075] A diagrammatic representation showing the vector multiplication to obtain the future period cash flow according to one embodiment of the present invention is shown in FIG. 5.

[0076] In the embodiment of the invention as shown, new membership vector 400 is multiplied by cash flow vector 500 to obtain the next period expected cash flow. Standard mathematical principles algebra are used to complete this operation as are well known in the art. By way of example, each profit driver segment term in the row of the new membership vector 400 is multiplied by the corresponding cash flow term in the column of the Cash Flow Vector 500. The products of these multiplications are then summed to arrive at the next period expected cash flow. Using the illustrated embodiment as an example we have the following vector multiplication to obtain the next period expected cash flow: 2 (.42) ($54 .85) + (.15) ($34 .97) + (.08) ($20 .44) + (.01) ($0 .78) + (.01) ($12 .19) + (.07) (- $4 .50) + (.01) (- $11 .48) + (.04) (- $18 .51) + (.11) (- $6 .32) + (.03) (- $9 .87) = $27 .88

[0077] Once the Net Present Value Module 140 calculates the next period expected cash flow, it may also discount period cash flows to estimate the Lifetime-value of each credit account for a specified number of periods. For the purpose of illustration, assume a current period cash flow of $118.00. The current period cash flow may be defined as the earnings generated by the account for the current period before depreciation, amortization and non-cash charges i.e. the difference between income generated by the account and account expenses for the current period. Using the next period expected cash flow calculated above, and a hurdle (discount) rate for a particular initiative of 10% per period, the net present value at the end of one period would be as follows:

$118+$27.88/(1+0.1)=$143.36

Sulkowski; paragraph [0104-0112]

[0104] One way in which the credit account can be valued comprises calculating the net present value for the account, based on the cash flow for each evaluated period. The net present value is calculated by first calculating a "next period" cash flow for each of a plurality of periods into the future, and discounting the "next period" cash flow for those periods to the present. The lifetime-value of the account may be defined as the current value plus the sum of the net present values for each future period, i.e. the expected net present value of each migration path multiplied by the probability associated with that path.

[0105] A block diagram illustrating the steps to calculate a lifetime-value for a credit account is shown in FIG. 10. Steps 1000 through 1030 depict the steps to calculate the credit account's net present value for a given period. The net present value for a given period is then used as the current period cash flow for the next subsequent period, and the net present value for multiple periods is calculated by iterating the step 1000 through 1030.

[0106] The next period cash flow is determined by first calculating a new membership vector (NMV) for the next period, for each account as shown in step 1000. This calculation is performed by first multiplying the initial membership vector (IMV) for the period describing the credit account by the transition matrix that best describes the desired product attributes to obtain a new membership vector.

[0107] Once the new membership vector for the next period is calculated, it is multiplied by the average cash flow for each profit driver segment to obtain a next period expected cash flow as shown in step 1010.

[0108] In one embodiment of the invention the average cash flow is in the form of a cash flow vector that describes the average cash flow for each profit driver segment. The cash flow vector is obtained by first organizing a population of credit accounts into groups based on similarities in product driver segments and credit product attributes. A cash flow for each profit driver segment in each of the credit accounts in the group is determined, and the average cash flow for each profit driver segment is calculated. Once the average cash flow for each profit driver segment is obtained, they are organized into a vector where the row of the vector describes the average cash flow for each of the profit driver segments.

[0109] The future period cash flow is then discounted to derive a net present value figure at step 1020. In one embodiment of the invention, discounting the next period expected cash flow comprises dividing the calculated next period expected cash flow by the sum of one (1) plus the hurdle or discount rate (in decimal format). For example, if the discount rate was 10% (percent)or 0.10, calculation of the discounted future period cash flow would comprise dividing the next period expected cash flow by 1.1.

[0110] The net present value at the end of one period is then the sum of the current period cash flow and the discounted future period cash flow as shown in step 1030.

[0111] The net present value for multiple periods is calculated by iterating steps 1000-1030 for each future period to be calculated as part of the lifetime-value. In these iterative steps, the net present value for the previous period is used as the current period cash flow when calculating the net present value for the current period. Accordingly, a determination is then made in step 1040 as to whether the final desired period has been reached. This determination may be based on, for example, user input, as when the credit account management desires to predict account values at a finite point in the future, or by operation of a set of rules, such as when an account's net present value after a period is zero, or below a threshold level.

[0112] If the answer to the query in step 1040 is in the negative, the process is repeated for the next period starting at step 1000. If, in the alternative,

the answer to the query in step 1030 is in the affirmative, the calculated net present value for final period becomes the lifetime-value of the account as shown in step 1040.

McCann: column 69, lines 15-41

Although described in terms of a database interacting with a client browser using a SQL (sequential query language) database information language, it will be recognized upon reference to the description that the exemplary embodiment of the present invention is preferably implemented as a variety of database objects that can be used independently and in parallel to obtain rapidly an optimum solution. One set of database objects is used to store data in a user-friendly format, another set uses the data to obtain solutions as well as installation and implementation instructions, and still another examines the data stored in the first set of database objects and asks the user questions as necessary to fill in any necessary but missing data. Furthermore, although described in terms of an interactive database of questions, it will be recognized that preferably a number of question blocks obtain information from the user. Further, although described in terms of user database for storing answers provided by a user to questions prompted from the question blocks (i.e., abstract information relating what the user wants), the disclosed embodiment also includes database objects for storing present configuration data (i.e., what the user already possesses). The exemplary embodiment of the present invention is, in its most basic sense, four large groups of database objects and related software. Collectively, the database objects define the state of the instance of the exemplary embodiment of the present invention session.

Applicants' attorney submits that the above combination of cited references neither teach all of the limitations of Applicants' claims, nor do they teach Applicants' claims as a whole. Instead, the Office Action selects words, phrases and functions from the references without reference to their context, makes certain assumptions as to how the references operate without any explicit teaching in the references, combines the references in a manner that a person of ordinary skill in the art would not think to do, and then asserts Applicants' claims are rendered obvious by the combination.

For example, the above portions of Johnson merely describe retrieving individual asset data from a database based on a given criteria, performing an NPV calculation, and then grouping and using the valuations in a sealed bid auction. However, notwithstanding the Office Action's assertion, the above portions of Johnson do not describe, and do not imply, a selector function that uses selection criteria specified by rules to select accounts, forecast amounts, and attrition and propensity rates from a database. Indeed, the above portions of Johnson do not refer to rules used by a selector function for accessing a database. In addition, the above portions of

Johnson do not refer to the selection of attrition rates or propensity rates from a database. Finally, although the above portions of Johnson describe the calculation of NPV, the above portions of Johnson do not refer to the calculation of FV or the subsequent calculation of LTV, in the manner recited by Applicants' claims.

In another example, the above portions of Atkins merely describe a personal financial program incorporating means of implementing, coordinating, supervising, planning, analyzing and reporting upon investments in an array of asset accounts and liability accounts within a client account. In Atkins, the client specifies his financial objectives, his risk preference, a forecast of economic and financial variables, and budgetary constraints. However, these "forecast amounts" are not used in the same context of Applicants' claims, namely the calculation of Net Present Value (NPV) and Future Value (FV) where the results of those calculations are integrated to provide a Life-Time Value (LTV).

In yet another example, the above portions of Sulkowski merely describe how its LTV framework estimates the future value of credit accounts. However, the calculations in Sulkowski refer only to the calculation of a NPV for each account, wherein the NPV is calculated by first calculating a "next period" cash flow for each of a plurality of periods into the future, and discounting the "next period" cash flow for those periods to the present. Thereafter, in Sulkowski, the LTV of the account is defined as its current value plus the sum of the NPVs for each future period. However, the above portions of Sulkowski do not describe performing NPV and FV calculations on selected accounts using selected forecast amounts, and attrition and propensity rates, wherein results from the NPV and FV calculations are integrated to provide an LTV.

In still another example, the above portions of McCann merely describe database objects that can be used independently and in parallel, wherein one set of database objects is used to store data, another set of database objects obtain solutions as well as installation and implementation instructions, and still another set of database objects examines the data stored in the first set of database objects and asks the user questions as necessary to fill in any necessary but missing data. Moreover, note that McCann describes an object-driven application tool unrelated to Applicants' invention that merely allows a Value Added Reseller (VAR) to access a large body of publicly available information about computing devices and to identify the needs of a particular customer or end user and to select an appropriate solution of equipment, hardware,

and networking products to meet the customer's needs. However, McCann says nothing about selection criteria being grouped in order to combine them in dynamically generated SQL statements, or that such grouped selection criteria are processed independently and in parallel to yield output tables comprising accounts, forecast amounts, and attrition and propensity rates selected from the database for use in both Net Present Value (NPV) and Future Value (FV) calculations that are integrated to provide a Life-Time Value (LTV). Indeed, the only reference to "parallel" in McCann is to the fact that these various database objects performing dissimilar functions from Applicants' claims can be used independently and in parallel.

In view of the above, it is clear that the Johnson, Atkins, Sulkowski, and McCann references do not teach all the limitations of Applicants' claims and cannot be combined in the manner suggested to show Applicants' claims as a whole.

Moreover, the remaining references, namely Gillis, Chen and Choy fail to overcome these deficiencies of Johnson, Atkins, Sulkowski, and McCann. Recall that these references were cited only against the remaining dependent claims, and were cited only for containing limitations shown in those dependent claims but not shown in the independent claims.

Thus, Applicants' attorney submits that independent claims 1, 16 and 31 are allowable over Johnson, Atkins, Sulkowski, and McCann. Further, dependent claims 2-4, 8, 11, 13-15, 17-19, 23, 26-30, 32-34, 48, 41 and 43-45 are submitted to be allowable over Johnson, Atkins, Sulkowski, McCann, Gillis, Chen, and Choy in the same manner, because they are dependent on independent claims 1, 16 and 31, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-4, 8, 11, 13-15, 17-19, 23, 26-30, 32-34, 48, 41 and 43-45 recite additional novel elements not shown by Johnson, Atkins, Sulkowski, McCann, Gillis, Chen, and Choy.

III. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate. Please charge all fees to Deposit Account No. 50-4370 of Teradata Corporation (the assignee of the present application).

Respectfully submitted,

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